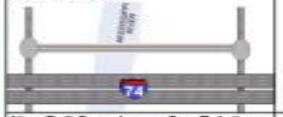
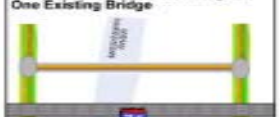
Continued Use Options for Existing Bridges

The I-74 project team, in coordination with the Project Steering Committee, is evaluating options for the existing Mississippi River bridges. Both the possible demolition of the existing bridges, or continued use of the existing bridge(s) for alternative transportation uses remain under consideration.

Local support and funding would be required for the existing bridge(s) to remain in place.

I-74 IOWA-ILLINOIS CORRIDOR STUDY

Continued Alternative Transportation Options for the Existing Bridges

Options	Transportation Issues	Environmental Issues	Financial Issues
New Local Road Connector on One Existing Bridge 	▫ Very low travel demand ▫ Requires construction of costly and complex transitions to existing local roads ▫ Limited useful life for existing bridge ▫ Constrains design options for new I-74 bridge(s) ▫ Not compatible with regional long range transportation plans	▫ Does not provide viable transportation use for existing bridge(s) because of low travel demand ▫ Potentially increases river flood elevations ▫ Increases environmental and socio-economic impacts due to transitions to existing local roads ▫ Retains historically significant northbound (NB) bridge	▫ Requires construction of costly new bridge and embankment sections for transition to local roads ▫ Public agencies required to assume jurisdiction, initial construction costs and ongoing operating and maintenance cost for bridge and new transition sections ▫ Existing river bridge would need to be removed and reconstructed in the future because of age ▫ May increase design and construction costs for new I-74 bridge(s)
New Rail Crossing on One Existing Bridge 	▫ Bridge design not suitable for rail transit Construction of transitions to existing rail corridors is not feasible ▫ Constrains design options for new I-74 bridge(s) ▫ Not compatible with regional long-range transportation plans	▫ Does not provide viable transportation use for existing bridge(s) because design not suitable for rail ▫ Potentially increases river flood elevations ▫ Retains historically significant NB bridge	▫ Potentially requires strengthening of bridge to accommodate transit use ▫ Requires construction of costly new connections to existing rail corridors ▫ Local or transit agencies required to assume jurisdiction, initial construction costs and ongoing operating and maintenance cost for bridge and new transition sections ▫ May increase design and construction costs for new I-74 bridge(s)
New Bike/Pedestrian Crossing on One Existing Bridge 	▫ Provides new linkage between existing riverfront trail system ▫ Provides opportunities for non-motorized travel between downtown areas ▫ Constrains design options for new I-74 bridge(s) ▫ Compatible with current regional long-range transportation plans	▫ Retains historically significant northbound NB bridge ▫ Potentially increases river flood elevations	▫ Public agencies required to assume jurisdiction, liability and ongoing operating and maintenance cost for bridge and trail connections ▫ Local cost participation required for initial construction ▫ May increase design and construction costs for new I-74 bridge(s)
New Bus and Bike/Pedestrian Crossing on Two Existing Bridges 	▫ Provides new bike/pedestrian linkage between existing riverfront trail system, and exclusive non-rail transit crossing (i.e. bus) ▫ Requires construction of costly and complex transitions to existing local roads ▫ Very low anticipated demand for exclusive bus crossing ▫ Limited useful life for existing bridges ▫ Constrains design options for new I-74 bridge(s) ▫ Exclusive bus crossing not included in current regional long-range transportation plans ▫ Bus crossing could readily be accommodated on new I-74 bridge(s)	▫ Exclusive bus transit crossing does not provide viable transportation use for existing bridge because of low travel demand ▫ Provides opportunity to retain both historically significant NB bridge and companion southbound (SB) bridge ▫ Potentially increases river flood elevations ▫ Increases environmental and socio-economic impacts due to transitions to existing local roads	▫ Requires construction of costly new transitions and connecting facilities for alternative transportation uses ▫ Public agencies required to assume jurisdiction, liability and ongoing operating and maintenance cost for both existing bridges and connecting facilities ▫ Local cost participation required for initial construction ▫ May increase design and construction costs for new I-74 bridge(s)

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I-74 Mississippi River Crossing Options

Evaluation Issue	Widen and Reconstruct Existing Bridges	Re-use Existing Bridges for SB I-74	Construct New I-74 Bridges
			 ① One existing bridge potentially retained for alternative uses
Constructability	○ • Bridges closed to traffic during construction • Requires dismantling and replacement of most bridge components	◒ • Bridges open to traffic during construction	◒ • Bridges open to traffic during construction
Meet Purpose and Need	○ • I-74 river crossing closed during construction • Retains undesirable approach roadway design in Illinois • Limits opportunities for new trail river crossings	○ • Does not address long term needs along I-74 • Does not provide adequate capacity in design year • Retains undesirable roadway design features for SB I-74 • Does not provide uniform access to downtown areas for NB versus SB traffic • Does not improves safety features for SB I-74	● • Addresses long term needs along I-74 • Provides acceptable capacity beyond design year • Improves design features and safety of I-74 • Provides opportunities for a new river trail crossing
Environmental and Socio-economic Effects	○ • Moderate impacts to historic buildings and wetlands • Comparable potential residential and business displacements • Retains but alters design of historically significant NB bridge • Significantly restricts Iowa-Illinois access during construction	◒ • Substantially increases width of transportation corridor and limits redevelopment opportunities • Moderate impacts to historic buildings and wetlands • Comparable potential residential and business displacements • Preserves historically significant NB bridge for limited period of time • Potentially increases river flood elevations	◒ • Either demolishes or creates visual effects on historically significant NB bridge • Moderate impacts to historic buildings and wetlands • Comparable potential residential and business displacements
Cost Effectiveness	○ • Significantly increased bridge design and construction costs • Significantly increases motorist travel time and costs during construction	○ • Increases operating and maintenance costs for river crossing • SB approach roadway must be reconstructed twice, increasing life cycle costs • Increases motorist travel times and costs due to multiple construction periods, frequent maintenance repairs, congestion, and difficulties with incident management • Defers costs for construction of improved SB bridge	● • Requires replacement of NB and SB bridges • Decreases operating and maintenance costs with new river crossing • Provides functionally acceptable roadway beyond design year • Decreases user costs

Key: ● Good Performance ◒ Fair Performance ○ Poor Performance

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